

## Classifications

EN ISO 2560-A	EN ISO 2560-B	AWS A5.1 / SFA-5.1	AWS A5.1M
E 42 2 C 25	E 4310 A	E6010	E4310

## Characteristics and typical fields of application

Cellulose covered electrode for vertical down circumferential welds in pipeline constructions. Highly economical compared with vertical-up welding.

Suitable for root runs, hot passes, filler and cover layers Excellent weldability in root pass welding (DC -); also in the vertical up position.

## Base materials

S235JR, S275JR, S235J2G3, S275J2G3, S355J2G3, P235GH, P265GH, P355T1, P235T2- P355T2, L210NB – L390NB, L290MB – L390MB, P235G1TH, P255G1TH L210NB-L385NB, L290MB-L385MB, P235G1TH, P255G1TH, root up to L555NB, L555MB  
API Spec. 5 L: A, B, X 42, X 46, X 52, X 56, root up to X 80

## Typical analysis


	C	Si	Mn
wt.-%	0.14	0.18	0.55

## Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength	Tensile strength	Elongation A	Impact values ISO-V KV J		
	$R_{p0.2}$	$R_m$	$(L_0=5d_0)$	20 °C	-20 °C	-30 °C
	MPa	MPa	%			
u	450 (≥ 420)	550 (500 - 640)	23 (≥ 22)	80	80	55 (≥ 27)

u untreated, as welded

## Operating data

	<b>Polarity</b>	DC (+) for root pass DC (-)	<b>Dimension mm</b>	<b>Current A</b>
	<b>Electrode identification</b>	PHOENIX CEL 70	2.5 × 300	50 – 80
	<b>Redrying</b>	Do not redry!	3.2 × 350	80 – 130
			4.0 × 350	120 – 180
			5.0 × 350	160 – 220

## Approvals

TÜV (00247), DB (10.014.79), ABS, LR, DNV GL, CE